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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/519,599      | 12/22/2004  | Jeong-Hwan Lee       | AB-1400 US          | 2625             |
| 32605           | 7590        | 08/23/2006           |                     | EXAMINER         |
|                 |             |                      |                     | CHUNG, DAVID Y   |
|                 |             |                      | ART UNIT            | PAPER NUMBER     |
|                 |             |                      | 2871                |                  |

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|                              |                 |              |  |
|------------------------------|-----------------|--------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |  |
|                              | 10/519,599      | LEE ET AL.   |  |
|                              | Examiner        | Art Unit     |  |
|                              | David Y. Chung  | 2871         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 22 December 2004.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**1. Claims 1, 2, 4, 9, 10, 12, 14-17 and 20 rejected under 35 U.S.C. 102(b) as being anticipated by Iwamoto et al. (U.S. 5,046,826).**

As to claims 1 and 14, Iwamoto discloses a backlighting system and a display panel utilizing it. Note in figure 1, the receiving container 107, a lamp 101-1 disposed in the receiving container for generating light, a glass substrate 104-2 between the liquid crystal display panel 106 and the lamp 101-1, and a diffuser 104-1 for diffusing light generated by the lamp. See column 4, line 58 – column 6, line 40; column 6, line 44 – column 9, line 2; column 10, lines 1-18.

As to claims 2 and 17, the diffuser 104-1 is a first diffusion sheet disposed on a face of the glass substrate 104-2 that is facing the liquid crystal panel 106.

As to claim 4, the bottom face of the receiving container 107 supports the light guide plate 108, and therefore supports the glass substrate 104-2.

As to claims 9, 10, 12, 15, 16 and 20, Iwamoto discloses that the diffusion sheet 104-1 can be a surface roughened PMMA for example. See column 5, lines 25-32.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2. Claims 3, 7 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto et al. (U.S. 5,046,826) in view of Iwata et al. (U.S. 6,111,699).**

As to claims 3, 7 and 8, Iwamoto does not disclose diffusion beads disposed on the upper and lower faces of the diffusion sheet. Iwata discloses a light diffusing film having light diffusing beads dispersed in a transparent resin. Note in figures 1-4, the light diffusing film 18 comprising transparent resin 16 and diffusing beads 14. See column 5, line 50 –column 8, line 67; column 9, line 18 – column 10, line 40; column 13, lines 3-34. Iwata teaches that this type of film reduces the variation of haze values, and thus improves display quality. See abstract. Therefore, it would have been obvious to

one of ordinary skill in the art at the time of invention to provide diffusing beads in order to improve display quality.

**3. Claims 5 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto et al. (U.S. 5,046,826) in view of Honda et al. (U.S. 2002/0012085).**

As to claims 5 and 11, Iwamoto does not disclose a glass substrate comprising a first glass plate, a second glass plate, and a second diffusion sheet. Honda teaches this type of structure as shown in figure 1 because of easiness of handling. Note the resin sheets 24 and the scattering sheet 11. It would have been obvious to one of ordinary skill in the art at the time of invention to provide the structure disclosed by Honda because of the easiness of handling. Comparative example 1 shown in table 1 has a haze value of 91.3%.

**4. Claims 6, 13, 18 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto et al. (U.S. 5,046,826) in view of Honda et al. (U.S. 2002/0012085) in further view of Iwata et al. (U.S. 6,111,699).**

As to claims 6, 13, 18 and 19, Iwamoto does not disclose a glass substrate comprising a first glass plate, a second glass plate, and a second diffusion sheet. Honda teaches this type of structure as shown in figure 1 because of easiness of handling. Note the resin sheets 24 and the scattering sheet 11. It would have been

obvious to one of ordinary skill in the art at the time of invention to provide the structure disclosed by Honda because of the easiness of handling.

As to claim 6, Iwamoto does not disclose diffusion beads disposed on the upper and lower faces of the diffusion sheet. Iwata discloses a light diffusing film having light diffusing beads dispersed in a transparent resin. Note in figures 1-4, the light diffusing film 18 comprising transparent resin 16 and diffusing beads 14. See column 5, line 50 – column 8, line 67; column 9, line 18 – column 10, line 40; column 13, lines 3-34. Iwata teaches that this type of film reduces the variation of haze values, and thus improves display quality. See abstract. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide diffusing beads in order to improve display quality.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (571) 272-2288. The examiner can normally be reached Monday-Friday 9:30 am to 6:00 pm.



DUNG T. NGUYEN  
PRIMARY EXAMINER